AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-027

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

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ANS-027 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 027.01
>From AMSAT HQ SILVER SPRING, MD.
January 27, 2013
To All RADIO AMATEURS
BID: $ANS-027.01

AMSAT-NA Website Outage

On or about 20 January 2013, AMSAT-NA's main web site www.amsat.org was compromised by an attacker, with the contents of the supporting database, including non-public information, posted on other publicly available web sites.

It is likely that the attacker gained enough access to the site to post arbitrary and possibly illegal content, so out of an abundance of caution the main site was shut down.

Neither the AMSAT store nor the Fox project web site were affected by this breach. The AMSAT Store is still open for business, and can be reached directly at http://store.amsat.org/catalog/

Mail services remain operational.

The main site was developed roughly 10 years ago by a AMSAT volunteers under a more benign Internet threat environment. The team that built that site is no longer associated with AMSAT, so work has been

underway over the last several months to move to a modern, maintainable, secure infrastructure. This recent breach will accelerate that activity.

In the interim, www.amsat.org will have limited content.

[ANS thanks AMSAT's User Services Team for the above information]

K6GSJ Donates OSCAR-1 Historical Artifacts to ARRL Archives

The February 2013 QST Magazine carries a story on page 71 noting the donation of OSCAR-1 historical artifacts to the ARRL Historical Collections. Lance Ginner, K6GSJ, one of OSCAR-1's builders, donated documents, test data, reception reports, and media to preserve the pioneering work of Project OSCAR.

The archive also contains a vintage OSCAR Locator and the QST Cover Plaque Award presented to Edgar Hilton, W6VKP for his article on locating OSCAR.

The article notes the work by ARRL Museum Volunteer Custodians Michael Marinaro, WN1M, and Jonathan Allen, K2KKH, to catalog and preserve these materials for future historians.

Visitors to the ARRL Laboratory's Vintage Equipment Exhibit in Newington, CT can see and hear an operational prototype of OSCAR-1 transmitting its "HI" beacon on 145.080 MHz.

[ANS thanks the ARRL for the above information]

Open Source Satellite OSSI CubeSat Launch in April 2013

OSSI-1, the Open Source Satellite Initiative satellite, developed by Hojun Song DS1SBO, is planned to launch in the 2nd quarter of 2013 into a 575 km 63[illegible] inclination orbit on a Soyuz-2-1b rocket from the Baikonur launch facility in Kazakhstan. The 1U cubesat is 100% based on COTS components. The main payload, the Bion-M1 satellite, anticipates a planned launch date of April, 2013.

Reports say OSSI-1 will have a beacon in the 145 MHz band, a data communications transceiver in the 435 MHz band although actual operating frequencies have yet to be published. The data communications transceiver is reported to be using an open protocol, details have not been released yet.

OSSI-1 also carries a 44 watt LED optical beacon to flash Morse Code messages to observers on Earth.

The development of the satellite has been documented on the Open Source Satellite Initiative Blog http://opensat.cc/blog/ and the Wiki http://opensat.cc/wiki/

Other cubesats on this launch will include:

+ SOMP - downlink on 437.485 MHz including CW, 1k2 and 9k6 BPSK, AX25 FSK, and AO40 standard 400bit/s BPSK.

+ BEESAT 2 - 4k8 GMSK on 435.950 MHz

+ BEESAT 3 - 4k8 GMSK on 435.950 MHz

+ Dove-2 - Commercial technology demonstration mission.

+ Bion-M1 - Research satellite collaboration between NASA and the
Russian Institute of Biomedical Problems. The mission
will launch an unmanned automated spacecraft carrying
a biological payload into Low Earth Orbit (LEO). The
rodents on the Bion-M1 spacecraft will be exposed to
spaceflight conditions for approximately one month.

AMSAT-UK published photos and additional news at:
http://www.uk.amsat.org/?p231

[ANS thanks AMSAT-UK for the above information]

IARU Satellite Coordination Board Says DOVE-1 Will Not Use 145.825

Dove-1, a technology development experiment to be launched to Low Earth Orbit on the inaugural launch of Antares in February, 2013 from Wallops Island, Virginia will no longer be using frequencies in the amateur radio bands based on information posted on the IARU satellite coordination web page for this mission.

The satellite had requested IARU coordination for a 1 watt transmitter on 145.825 MHz to downlink a 1200 baud AFSK AX.25 beacon with telemetry and health data.

The Wallops Launch also includes the PhoneSat cubesats into a planned 280 x 270km orbit at 51.6 deg inclination. Due to the extremely low orbit these satellites will reenter the Earth's atmosphere after approximately 2 weeks.

(See ANS-006 at http://amsat.org/pipermail/ans/2013/000681.html for details of the PhoneSat mission.)

IARU Amateur Satellite Frequency Coordination web page can be found at: http://www.amsat.org.uk/iaru/

[ANS thanks the IARU Satellite Frequency Coordination Board for the above information]

Vote for Your Favorite Photos From Japan's PRISM Satellite

PRISM, a nano-satellite developed by Intelligent Space Systems Laboratory, was launched on January 23rd 2009. It's mission is to take pictures of the Earth from outer space. 35 photos taken by PRISM's Wide Angle Camera have been selected by the PRISM team and posted at: http://www.smaster.jp/Sheet.aspx?SheetIDr633

Please take a look at the pictures and vote for your favorites. Enter your choices in the check-box above each photo - multiple selections are allowed.

PRISM also carries an orbital store-and-forward message box open for use by amateur radio operators. In PRISM's HAM Service FM packets uplinked are stored and available for download on future passes.

Downlink Frequency: 437.425 MHz FM, AFSK 1200, AX.25, UI Frames
Beacon Freequency: 437.250 MHz
Call Sign: JQ1YZW

Full details of Amateur Radio access to PRISM is documented at:
http://www.space.t.u-tokyo.ac.jp/prism/en/HAMservice_info.aspx
http://www.space.t.u-tokyo.ac.jp/prism/en/HAMservice_rule.aspx

You will find a pull-down menu at the bottom of this web page. Use the pull-down arrow to access "Agree" then click on the web page button also labeled "Agree". This will bring you to another web page revealing uplink frequency and message formats.

[ANS thanks Professor Nakasuka of the University of Tokyo and the PRISM Team for the above information]

February 14 PSLV-C20 Launch Planned by India

India's "The Hindu" newspaper reports that the Indian Space Research Organisation (ISRO) has slated its first launch of the year PSLV-CA (PSLV-C20) for February 14. This launch includes the SARAL ocean study spacecraft and satellites carrying amateur radio payloads.

The payload includes:

+ SARAL - Ka-band radar altimeter operating at 35.75 GHz.
  See: http://smsc.cnes.fr/SARAL/

+ NEOSSat Search for near-Earth asteroids and space debris.

+ Sapphire – Canadian Department of National Defence first dedicated military satellite.

+ CanX-3a, BRITE (BRIght-star Target Explorer) – small satellite designed to make photometric observations of bright stars in order to study their variability.

+ TUGSat-1 - S-Band for telemetry downlinks and will have a 145 MHz CW beacon.

+ AAUSat 3 – 1U cubesat developed and constructed by students from Department of Electronic Systems at Aalborg University Denmark, testbed for a pair of AIS receivers. The IARU Amateur Radio coordinated frequency is 437.425 MHz using Viterbi and Reed Solomon encoding.

+ Max Valier – Small satellite to encourage student experimentation. IARU Amateur Radio coordinated frequencies are 145.860 MHz and 145.960 MHz.

Full details and links to the satellite team web pages are posted on the AMSAT-UK web at: http://www.uk.amsat.org/?p180

Read the Hindu article at: http://tinyurl.com/TheHindu-PSLV
(www.thehindu.com)

Zarya Launches and Orbital Operations Calendar
http://www.zarya.info/Calendar.php

[ANS thanks AMSAT-UK for the above information]

NASA History Program Office Summer 2013 Internships

The NASA History Program Office is seeking undergraduate and graduate students for summer 2013 internships. The History Program Office maintains archival materials to answer research questions from NASA personnel, journalists, scholars, students at all levels and others from around the world. The division also edits and publishes several books and monographs each year. It maintains a large number of websites on NASA history.

Students of all majors are welcome to apply. While detailed prior knowledge of the aeronautics and space fields is not necessary, a keen interest and some basic familiarity with these topics are needed. Strong research, writing and editing skills are essential. Experience with computers, especially hypertext markup language, or HTML, formatting, is a plus.

Intern projects are flexible. Typical projects include handling a variety of information requests, editing historical manuscripts, doing research and writing biographical sketches, updating and creating websites, and identifying and captioning photos.

Applications for summer 2013 internships are due Feb. 4, 2013.

For more information, visit http://history.nasa.gov/interncall.htm.

If you have questions about this opportunity, please contact Bill Barry at bill.barry@nasa.gov.

[ANS thanks NASA Education Express Message of Jan. 24, 2013 for the above information]

Surrey Satellite Selected to Evaluate Small Satellites for GPS

An article posted on the GPS Daily website says the US Air Force Research Laboratory (AFRL) has selected Surrey Satellite Technology US LLC (SST-US) to investigate cost reduction and augmentation of the current GPS constellation through the application of the small satellite approach. (Full article at: http://tinyurl.com/Surrey-GPS)

SST-US will examine how constellations of smaller satellites could improve the overall system performance and resilience, including ways to deliver high-power signals and alternative architectures for rapid commanding that could provide system capability improvement.

Small satellites have become the focus of many institutional programs in recent years, as they have become ever more capable and demonstrated their importance.

[ANS thanks GPSDaily.Com for the above information]

Satellite Shorts From All Over

+ Free NASA Calendar in PDF format with imagery from the ISS is posted at: http://www.nasa.gov/pdf/716960main_iss_calendar_2013.pdf

+ An animation showing UKube-1 CubeSat on-orbit and its payload is posted at: http://www.uk.amsat.org/?p334. UKube-1 is slated to launch in the 2nd/3rd quarter of 2013 on a Soyuz-2 along with TechDemoSat-1. UKube-1 will carry a set of AMSAT-UK FUNcube boards to provide an amateur radio 435/145 MHz linear transponder and a 1200 bps BPSK beacon for educational outreach.

+ Tom Doyle, W9KE has released 'Satellite Explorer', a Windows 8 app that runs on Intel based tablets, laptops and desktops as well as Windows RT tablets like the Microsoft Surface. It is available in the Windows Store - search for 'Satellite Explorer'. The app is free but if you find it of value please contribute something to your favorite AMSAT project. Watch a preview at: https://www.youtube.com/watch?v=-jPjpDoYs (W9KE)

+ The 2013 SA AMSAT Space Symposium will be held at the Innovation Hub in Pretoria on 18 May 2013. The theme of the conference is "Space - a challenging Amateur Radio frontier". If you are planning to submit a paper please send in a brief synopsis of the proposed paper by 31 January to saamsat@intekom.co.za. For more information visit www.amsatsa.org.za.

+ Enjoy an excerpt from "An Astronaut's Guide to Space Etiquette" at: http://www.space-travel.com/reports/An_Astronauts_Guide_999.html Scroll down about halfway down the page. (Space-Travel.com)

+ AMSAT-NA congratulates Martha Saragovitz on her 35th anniversary as our office manager in Silver Spring, Maryland. Please send her your greetings and congratulations to martha@amsat.org!

+ Professor Sir Martin Sweeting G3YJO appeared on Monday's BBC Radio 4 show For All Mankind in which Chris Riley examined the enduring legacy of the Apollo moon missions. In the interview Martin G3YJO mentions the first UOSAT's (OSCAR-9 and 11). You can hear him at 08:52 into the recording which is at: http://www.bbc.co.uk/programmes/b01pcqkk It is understood the recording will be available until January 28.

+ The Australian Geographic website features an article on Australia's first amateur satellite, Australis-OSCAR-5 which was launched on 23 January 1970. See: http://tinyurl.com/Australia-AO5 (www.australiangeographic.com.au)

+ SpaceMart.com posted an article, "Phoenix Rising: New Video Shows Advances in Satellite Repurposing Program" at: http://tinyurl.com/DARPA-Phoenix (SpaceMart.com) DARPA's Phoenix program plans to repurpose retired satellites while they remain in orbit. The article contains a link to an HD video simulation posted by DARPA.

+ Thursday, January 31 at 8PM Eastern (UTC-5) will be the last Hudson Valley Satcom Net until further notice. The radio link is via the

MBARC Repeater on 146.970 MHz and on Echolink on the N2EYH-L node.
(Stu, WA2BSS)

[ANS thanks everyone for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind the young ham who was practicing the violin in the living room while his father was trying to read in the den. The family dog was lying in the den, and as the screeching sounds of little Harold's violin reached his ears, he began to howl loudly. The father listened to the dog and the violin as long as he could. Then he jumped up, slammed his paper to the floor and yelled above the noise, "For Pete's sake, can't you play something the dog doesn't know?!"

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM